

ABSTRACT

Link robustness, chromatic dispersion and polarization mode dispersion (PMD) immunity can be improved in fiber optical system by using a method for receiving an optical double sideband signal over an optical fiber system, comprising the steps of splitting the received optical double sideband signal into an upper sideband signal and a lower sideband signal, photodetecting the upper sideband and the lower sideband, equalizing the photodetected upper sideband signal and the lower sideband signal, and combining the equalized upper sideband signal with the equalized lower sideband signal. While PMD compensation is envisioned as a major application, one may also use the method and system for chromatic dispersion compensation or dispersion slope compensation in high bit rate systems, i.e. using dispersion compensation fiber (DCF) for coarse compensation and diversity receiver with electrical equalizer for fine tuning.